1.1.1 Incident Category

Emergency Response; CERCLA incident category; Active Production Facility; Unified Command established

1.1.2 Site Description

1.1.2.1 Site Location

The TPC Group (TPC) Port Neches Operations site is located at 2102 TX-136 Spur, Port Neches, Jefferson County, TX 77561 (29.978056, -93.939167). The 218-acre site is an active facility producing products derived from petrochemical raw materials from C4 hydrocarbons, including 1, 3-butadiene (butadiene), raffinate, and butene. Butadiene is used in the production of synthetic rubber used for tires and automobile hoses. Combined production capacity for this facility is more than 900 million pounds per year. Logistics infrastructure capabilities include pipeline, barge, rail and tank car. The Site contains multiple storage tanks and related processing equipment. Treated waste water is discharged from the on-site joint waste water treatment plant (JWWT) direct to the Neches River.

The site borders the Neches River to the north, which flows to Sabine Lake to the east. Residential properties reside to the northwest, west, southwest, and northeast of the site. Population estimate for Port Neches is 12,831 (US Census, population estimates, July 1, 2018, (V2018)).

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1.1.2.2. Description of Threat

On 27 November 2019, at approximately 01:00, an explosion was reported at the TPC Group Port Neches Operations site involving a processing unit. The explosion resulted in injuries to two TPC group employees and one contractor at the site. Personnel were transported to the Southeast Texas Regional Medical Center and to Memorial Herman in Houston, TX for treatment.

1.1.3 Removal Preliminary Assessment/Removal Site Inspection Results

Due to the instability of the Site, which includes active fires, the possibility of additional explosions, and limited ability to conduct a detailed status assessment of the tanks, towers, and contents in each after the incident began, on-site preliminary assessment efforts have been minimal.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

27 November 2019

At approximately 01:00, an explosion was reported at the TPC Group Port Neches Operations site involving a processing unit. An evacuation radius of 0.5 mile was established shortly after the initial explosion, and a shelter in place was issued for the City of Groves, located approximately 2.6 miles southeast of the facility, the area south of the facility, and the Hwy 73 bridge crossing at the Neches River.

TPC Group activated its Emergency Response Plan, and requested assistance from Port Neches Fire Department, and the Huntsman and Sabine Neches Chiefs Association. Notification was also

made to local, state, and federal authorities of the incident. At approximately 02:00, an Emergency Operations Center (EOC) was established at the Huntsman Administrative Building at 2701 TX-136, Port Neches, TX.

An EPA OSC was activated to respond to the incident, and at approximately 02:45, the EPA Superfund Technical Assessment Response Team (START) was activated, arriving onsite at approximately 05:30 to begin ground air monitoring of the vicinity of the incident site, and within the downwind community. The EPA's Airborne Spectral Photometric Environmental Collection Technology (ASPECT) was deployed from Addison, TX, and arrived onsite at approximately 08:00 to conduct airborne real-time chemical and radiological detection, infrared and photographic imagery of the incident and downwind community. A no-fly zone (NFZ) was established 3 miles wide and 3,000 feet high surrounding the incident site.

Texas Commission on Environmental Quality (TCEQ) deployed personnel and contractors to the incident site to begin air monitoring within the downwind community in conjunction with EPA response efforts.

There were no detections of VOCs by the EPA and TCEQ air monitoring teams at downwind monitoring locations.

On behalf of TPC, Center for Toxicology and Environmental Health LLC (CTEH) conducted perimeter air monitoring of the incident site, and detected a single maximum concentration of 1.2 ppm VOCs. Ambient air sampling began within the 4-mile radius and surrounding areas.

An air monitoring strike team was established, comprised of personnel from EPA, TCEQ, and TPC contractors. This strike team would be dispatched to conduct additional air monitoring at locations where detections were measured above the established 5.0 ppm VOC action level or 0.5 ppm butadiene action level, and to conduct air sampling as necessary.

A Water Safety Zone was established by USCG from Neches River Light 20 (Fina Lower Anchorage) to Neches River Light 29 (Phillips 66). USCG allowed barge traffic monitored one at a time.

At approximately 13:48, a second explosion occurred at the incident site. After the second explosion, the Jefferson County Judge's Office expanded the mandatory evacuation zone to a 4-mile radius.

Onsite response efforts and downwind community air monitoring continued overnight.

28 November 2019

Response operations are continuous 24 hours/day. Unified Command determined a 06:00 to 06:00 operational period in effect beginning on 28 November 2019.

Fire Response

Onsite response operations applied approximately 36,000 gallons per minute (GPM) (50 million gallon/day) to the ongoing fires utilizing 3 fire trucks and water cannons at 7 remote fire monitoring stations.

TPC deployed personnel to connect generators that would return power to the wastewater treatment plant (WWTP), and transport firefighting runoff water from onsite storage ponds to the WWTP. Due to lack of onsite electrical power, the capacity of the WWTP was reached, and water discharged from Outfall 201, into a canal that eventually flows into the Neches River, 3 miles

downstream. At approximately 11:00, utilizing unmanned aerial drones, TPC observed sheen downstream of Outfall 201. TPC activated Clean Harbors and Resolute to respond to the hydrocarbon release, and to place absorbent boom in strategic locations. At approximately 23:00, electrical power was restored to the WWTP, and began pumping water from surrounding treatment ponds and lagoons at 5,000 GPM.

NOAA's plume modeling forecasted that the main trajectory of the smoke plume to move westward across the Jack Brooks Regional Airport, Nederland, and Port Neches through the morning of 28 November 2019. By late morning, winds above the surface increase and become more from the southeast and south. This would allow the main trajectory of the plume to shift to more to a northwest direction this afternoon and towards the Central Gardens area, Lamar University, and possibly the west end of Beaumont.

Air Monitoring
Handheld air monitoring was conducted from 27 November 2019 to 28 November 2019 at approximately 85 locations in the communities surrounding the incident site by the EPA Team. The air monitoring results were reported below the detection limit at all locations for total volatile organic compounds (VOCs) and for 1,3-butadiene. ASPECT completed three flights in the first reporting period and did not detect readings above detection limits.

29 November 2019
The evacuation order was lifted at the order of the local County Judge.

Fire Response
Nine actively fed fires burning. The facility developed a block isolation plan to address the fires, which was successful in slowing down some of the fires. To prevent releases of fuel or vapors, the facility is not extinguishing fires where gas is actively leaking.

Estimated rate of water use for fire suppression is approximately 19,000 gpm. To date, four partial totes of foam have been used. The facility has additional foam on hand for vapor suppression and firefighting, however the plan is not to utilize it unless necessary. Unified Command has given permission for foam use if necessary for safety reasons.

Air Monitoring
Handheld air monitoring was conducted from November 28, 2019 to November 29, 2019 at approximately 111 locations in the communities surrounding the incident site by the EPA Team. The air monitoring results were reported below the screening level at all locations for particulates, total volatile organic compounds (VOCs) and for 1,3-butadiene.

There was no ASPECT data for this reporting period.

30 November 2019
Fire Response
At approximately 02:00, fires in Block 5 were extinguished. Three actively fed fires still burn in the Block 10 area. Estimated rate of water use fire suppression is approximately 31,000 gpm (7,000 gpm recycled water, 24,000 freshwater). The WWTP continues pumping firefighting runoff water from storage ponds to the WWTP. Current pumping rate is approximately 6,900 gpm.

Firefighting runoff water overtopped the tank containment berm. The runoff water discharged to the 201 Canal, which leads to a permitted containment discharge area. The facility's Oil Spill Response Organization (OSRO) placed absorbent boom every 50-60 feet within the canal.

At approximately 23:20, South 45-B tower, which had been leaning since the initial explosion, collapsed near the actively burning area. Response personnel stated a natural gas odor was present in the area, and evacuated to the muster station. An accountability check was performed at the muster station prior to relocating further away from the incident site.

Air Monitoring
Handheld air monitoring was conducted from 29 November 2019 to 1 December 2019 at approximately 134 locations in the communities surrounding the incident site by the EPA Team. The air monitoring results were reported below the detection limit at all locations for total volatile organic compounds (VOCs) and for 1,3-butadiene. 7 locations were reported above the screening level of 138 µg/m3 for particulates. ASPECT did not fly.

CTEH conducted 789 readings for 1,3 butadiene. 10 detections were recorded with a maximum reading of 1.0 ppm. Unified Command was notified of these reading and additional air monitoring assets, including EPA, were dispatched to the area. The last reading was at 0650. EPA and TCEQ air monitoring teams were unable to confirm these readings.

Water Sampling
The EPA Team collected 2 water samples in the impacted canal to the Neches River, and 1 water sample upstream of the incident. Samples will be submitted for analysis of VOCs, SVOCs, Oil and Grease, Glycols, Total Petroleum Hydrocarbons, and Total Organic Carbon.

1 December 2019
Fire Response
As of 1500 hours, 2 pressure fires continue to burn, and TPC will continue to provide suppression to the incident until the fires extinguish themselves.

Air Monitoring
At 0100, CTEH air monitoring teams recorded instantaneous readings of 3.0 ppm of butadiene at the Command Post located at the intersection of highway 366 and SPUR 136. Sustained readings were 2.28 ppm. Due to elevated butadiene air monitoring results, the command post was moved to the entrance of the joint WWTP. At approximately 02:30, the sustained readings had reduced to 1.0 ppm. Air monitoring results in the community were below screening levels.

Handheld air monitoring was conducted from November 30, 2019 to December 1, 2019 at approximately 82 locations in the communities surrounding the incident site by the EPA Team. The air monitoring results were reported below the screening level at all locations for particulates, total volatile organic compounds (VOCs) and for 1,3-butadiene.

Water Sampling
The EPA Team collected 5 Water samples (4 with one duplicate) were collected at 4 locations.

ASPECT flew with no detections.

2 December 2019
Fire Response
Xxx

Air Monitoring

Water Sampling